Idaho Currents

Boise Company to Receive DOE Wind Development Award

Four Boise men will be honored with a special award for their wind generation efforts by the U.S. Department of Energy on Jan. 17 at the Lewandowski Wind Farm east of Boise.

Brian Jackson, Lars Dorr, Tim Harmon, Craig Haynes and Todd Hanes, co-owners of G3, LLC, a Boise company, will receive the Wind Powering America's Carpe Ventem (Seize the Wind) Award during a short ceremony at the wind farm.

"This award was originally designed to recognize the developers of the first commercial scale wind farm project in the state," says Lawrence Flowers, with the National Renewable Energy Laboratory managing DOE's Wind Powering America program. "Since its inception, WPA has given the award to the inaugural projects in Idaho (Fossil Gulch), Montana, and New Jersey.

"The Lewandowski project re-invigoration, while not exactly meeting the original award criteria, was deserving of recognition for showing unusual commitment to the success of wind energy development in a wind-challenged state," says Flowers.

Wind farm history

The wind farm, located between Boise and Mountain Home, was originally constructed by Bob Lewandowski beginning in February 2002. The first turbine began generating electricity in late October 2002, followed by the second turbine about 21 months later. The third turbine was turned on in the spring of 2005.

After seeing his 30-year dream come to fruition, Lewandowski died in late July 2005. Following his death, it was discovered there was little documentation of how the equipment was assembled, required maintenance procedures, and operating guidelines. With no one to maintain the equipment, the turbines stopped spinning within a short time.

About a year ago G3 bought the wind farm. The team, which includes three mechanical engineers, an FAA licensed airplane mechanic, and an electrician, began repairing the turbines. The wind farm again began creating energy by late spring.

"Getting the turbines back online was not easy," says Todd Haynes. "Lots of time has been spent on the learning curve."

The wind farm has three 152-foot towers with turbines capable of generating 324 kilowatts of electricity. Considering variations in wind, the turbines provide an average annual output of about 80 kW – enough energy to supply the electricity needs of 66 average Idaho homes.

The power, purchased by Idaho Power Co., feeds into the electric grid and is balanced by the electricity use of nearby neighbors.

Annual Conference Will Highlight Renewable Energy

A former Deputy Chief of Naval Operations will be one of the keynote speakers during the 7th annual ***Harvesting Clean Energy*** conference Jan. 29-30 in Boise.

Vice Admiral Dennis McGinn, a 35-year Navy veteran and current senior vice president at Battelle National Laboratory, will discuss "How Clean Energy and America's Farmers Can Help Secure America."

The conference, co-sponsored by the Energy Division, provides a local forum to learn from renewable energy pioneers about what it takes to build and operate a profitable project. This year's theme is "Charting the Way to Rural Economic Development Through Clean Energy Production."

"While there is a tremendous potential for renewable energy development in Idaho, locating and utilizing the necessary technical expertise and the financial resources can be time consuming and discouraging," says Gerry Galinato, principal energy specialist with the Energy Division. "This is the Northwest's premiere event that brings together agriculture and renewable energy industries that participate in clean energy production and other bio-product markets."

The conference will feature workshops and lectures on wind power, biofuels, biopower, geothermal and remote solar. There are a number of federal and state grants and loans available for rural clean energy projects. Experts will be on hand to help individuals assess what is realistic, how to make your project "funding friendly," and where to go for help.

"More than a dozen sessions are planned on everything from tapping Idaho's geothermal potential to learning how Midwest farmers and rural communities are pooling resources to build wind projects and multi-million dollar biofuel plants," says Galinato.

"In fact, one workshop focuses on techniques for generating your own electricity and making your own fuel right on your own farm," he adds.

For more information on the conference and registration, visit www.harvestcleanenergy.org/conference

Future Windows May Block Unwanted Sunlight

A recent press release from the U.S. Department of Energy says the agency is "studying the next-generation's high-performance residential and commercial window prototype that, when widely implemented in the marketplace, could save billions of dollars annually in energy costs."

The new technologically advanced window concept is the result of collaboration between DOE's Lawrence Berkeley National Laboratory and SAGE Electrochromics, Inc., of Faribault, Minnesota.

"DOE is investing in research to develop and commercialize the products of tomorrow, such as this next generation of window, so that by 2020 we can build homes that are zero net energy," says Andy Karsner, DOE assistant secretary of Energy Efficiency and Renewable Energy.

This prototype incorporates dynamic electrochromic glass that can be electrically controlled to change from clear to dark. The prototype also includes other technology innovations, such as low emissivity (Low E) glass coatings, an unsealed internal plastic triple pane, krypton gas and an insulating frame.

This is the first time that all of these technologies have been optimized in an integrated fashion, according to DOE. Continued research and development lower the cost of advanced energy-saving glass and will allow today's prototypes to be incorporated into affordable, mass-produced products from many window suppliers.

DOE's long-term window development goal is to produce windows that are as energy efficient as today's walls. By incorporating advanced technologies, windows can actually become a net-energy

See Future, page 3

It's Not Too Late To Winterize Your Vehicles

No matter where you live in Idaho, you're almost guaranteed to travel on snow-covered roads during the winter. To make sure you safely arrive at your destination, take some time to make sure your vehicle is ready for cold weather by following these easy tips.

Get the right kind of oil change. If your car needs servicing, make sure the oil has the right viscosity, or thickness, for this time of year. Oil tends to thicken as it gets colder, and if it's too thick it won't do the best job of keeping your engine lubricated.

Make sure you can see outside. Wiper blades, windshield washer fluid, and a properly working defroster are all necessary. Make sure your windshield wipers work properly and the washer reservoir is full with fluid. Don't use water – it will just freeze, so make sure it's fluid. Check your vehicle's heater and defroster to make sure they work properly.

Check the battery. Now is the time to make sure the battery's posts and connections are corrosion-free and full of water. If the battery is more than three years old, have a certified repair shop test it to make sure it will hold a charge.

Check the antifreeze. While the fluids are being checked, make sure the right mixture of antifreeze and water is in your radiator. This will prevent the mixture from freezing, even in those sub-zero temperatures.

Inspect the hoses and belts. Cold weather can be hard on hoses and belts, even in newer vehicles. So when you have your vehicle serviced, have the belts and hoses checked, also.

Check the tire pressure. To get the best possible traction on wet, snowy or icy roads, your tires need to be inflated properly. Consult your owner's manual for recommended tire pressure.

Consider changing tires. Depending on where you live and the terrain you usually drive in, you may want to switch from all-season to snow tires during the winter.

Does your vehicle have 4-wheel drive? If so, have the four-wheel-drive system checked to make sure it's working properly, especially if you don't use the 4WD in the summer. Make sure the system engages and disengages easily and that all drivers of that vehicle understand how to use it properly.

Future, from page 3

provider for homes. Advances in window technology will also ensure that their solar heat gain is very low in summer, which could potentially mitigate electricity demand for air conditioning.

"The window R&D program has a record of successfully partnering with industry to bring new technology to the marketplace. Thirty years ago, DOE invested approximately $4 million in a series of R&D projects coordinated by Lawrence Berkeley Lab," according to the press release.

"The resulting Low E glass coatings, which reflect near- and long-wave radiation, have saved the nation more than $8 billion in energy costs," says DOE. "Today, over 50 percent of windows sold have Low E glass, saving millions in energy costs."

Consumers in the market for new windows should look for those carrying the Energy Star® label. When window shopping, look for the National Fenestration Rating Council (NFRC) label. In colder climates, such as in the Northwest, look for a U-value of 0.35 or lower. These windows have at least double glazing and a Low E coating. These windows come in either vinyl or wood frames.

If you don't want to replace your existing windows, install Low E exterior or interior storm windows. Storm windows should have weather stripping at all movable joints, be made of strong, durable materials, and have interlocking or overlapping joints.

Additional information about Energy Star windows is available at www.energystar.gov or by calling the Idaho Energy Hotline, **1-800-334-SAVE**, and asking for a free Energy Tips booklet.

Idaho Currents, a bi-monthly newsletter featuring articles on energy and water issues, is brought to you by the Idaho Department of Water Resources, 322 E. Front St., Boise, ID 83702, and is supported by the U.S. Department of Energy. Funding from DOE is through the Congressionally-approved State Energy Program. Linda Cawley, Editor; Diane Stroup, Graphic Designer; Dave Tuthill, Interim Director; C.L. "Butch," Governor. Electronic subscriptions are free by contacting the editor at linda.cawley@idwr.idaho.gov or by calling the Idaho Energy Hotline, 1-800-334-SAVE.